UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/489,517	01/21/2000	John Richard Zavgren JR.	99-445	5940

			EXAMINER
32127	7590	11/15/2004	FERRIS, DERRICK W

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ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)
Office Action Summary		09/489,517	ZAVGREN, JOHN RICHARD
		Examiner	Art Unit
		Derrick W. Ferris	2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _13 September 2004_.

2a)☒ This action is **FINAL.** 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1,2,6-15,18-30 and 32-37_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _1,2, 6-13, 26, and 37_ is/are allowed.

6)☒ Claim(s) _14, 15, 19-25, 27-30, 32-36_ is/are rejected.

7)☒ Claim(s) _18_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _21 January 2000_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   **Claims 1-2, 6-15, 18-30, and 32-37** as amended are still in consideration for this application.

2.   Examiner **withdraws** the anticipated rejection to *Grace* based on applicant's claim amendments.

3.   Examiner does **not withdraw** the anticipated rejection to *Messinger* based on applicant's claim amendments.   In particular, examiner notes that for amended **claim 27** a forth area of memory is further anticipated.

4.   Examiner **withdraws** the obviousness rejection *Grace* in view of *Feldmann* based on applicant's claim amendments.

5.   Examiner **withdraws** the obviousness rejection *Messinger* in view of *Feldmann* based on applicant's claim amendments.

6.   Examiner **withdraws** the obviousness rejection *Grace* in view of *Lane* based on applicant's claim amendments.

7.   Examiner does **not withdraw** the obviousness rejection *Messinger* in view of *Lane* based on applicant's claim amendments. Examiner notes that an amended step of a reset control is further taught by the reference in light of applicant's definition of reset control in their specification.

Claim Rejections - 35 USC § 102

8.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9.   **Claims 27-30** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No.

6,687,750 B1 to *Messinger et al.* ("*Messinger*").

As to **claims 27-30**, see separate information files 204, 206 and 208 and network

topology in figure 2 with respect to column 3, lines 17-27 and column 1, lines 40-54. In

particular, note that *Messinger* discloses monitoring timely and accurate information

about the states of each node along with the activities performed on each node (see e.g.,

column 3, lines 17-20) where a node is a router. Included in this is node status changes,

messages received and transmitted by the node, and link status changes in the network.

A forwarding table for each node is also taught since *Messinger* discloses that routers

exchange protocol-specific information between separate networks and determine the

best path for sending data, see e.g., column 3, lines 15-17. Therefore this information

must be stored in a memory of a node. In addition, information is further time-stamped,

see e.g., column 1, lines 30-39.

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11.   **Claims 32 and 33** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 6,687,750 B1 to *Messinger et al.* ("*Messinger*") in view of U.S. Patent 5,437,009 to

Lane.

As to **claim 32**, see figure 2 where a network topology diagram 209 is part of the

visualization application 210. In particular, see column 2, lines 1-37 where a replay

control is taught. A user may at any time (i.e., the visualization is dynamically setup)

select a playback by selecting the starting and ending time periods. Thus in selecting the

starting and ending time periods for different playback scenarios a reset control is taught.

In particular, applicant teaches in their specification that a reset 634 resets the network

operation to the beginning of the playback sequence, see e.g., page 10, lines 3-8. Thus

since the graph is dynamic the sequence is reseleted. Specifically, the steps in figure 3

can be re-run over and over again (i.e., reset) at the operators convenience. However,

assuming the above assumption is improper, than examiner also notes the following

obviousness rejection as well. Examiner notes that it would have been obvious to one

skilled in the art prior to applicant's invention to further include the limitation of

"wherein said replay control controls include a reset control". In particular one skilled in

the art would be motivated to replay the visualization as many times as necessary in order

to obtain a correct visualization of the network. *Lane* teaches the above-cited limitation at

e.g., figure 6 and column 5, lines 1-57. In particular, *Lane* provides the motivation of

going back and forth in time using the controls such that a particular search is played over

and over again.

As to **claim 33**, *Messinger* is silent to the further limitations of allowing the operator to at least one of fast forward and rewind the replaying network operation. In particular, see column 2, lines 20-37.

Lane teaches the above-cited limitation at e.g., figure 6 and column 5, lines 1-57.

Thus the examiner purposes to modify the back searching of *Messinger* to further include the limitation of fast forwarding and rewinding.

Thus examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to further include the limitations of allowing the operator to at least one of fast forward and rewind the replaying network operation. In particular, one skilled in the art would have been motivated to make the purposed modification for the purpose of allowing an efficient way of analyzing network events. *Lane* teaches such a motivation found at e.g., column 2, lines 33-36.

12.   **Claims 34-36** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,687,750 B1 to *Messinger et al.* ("*Messinger*") in view to U.S. Patent No. 6,625,659 B1 to *Aramizu et al.* ("*Aramizu*").

As to **claim 34**, *Grace* teaches alerting an operator using a visual display of a relationship between historical events (e.g., see Abstract).

With respect to the limitation "collecting information from at least one of the nodes, the information describing the network operation over a period of time" see e.g., column 3, lines 50-56 and column 4, lines 41-53.

With respect to the limitation "reconstructing the network operation for the time period from the collected information" see figure 2.

With respect to the limitation "replaying, for an operator, the network operation as the network operation has occurred during the time period using the reconstructed network operation" see figure 2 in addition to column 1, lines 23-34; column 6, lines 27-34; and column 6, line 60 – column 7, line 4. In particular, figure 2 shows a time period from t-9 to t-0.

Examiner notes *Messinger* may be silent or deficient to the further limitation "creating forwarding tables from the recorded events". *Aramizu* teaches the above limitation e.g., at column 2, lines 55-64. In particular, the route-processing unit 1 may set, rewrite, and delete the contents of the routing tables based upon route information received e.g., by the routing protocol. Thus examiner proposes to modify *Messinger* by clarifying that routing tables can be set based upon received routing table information from other routers (i.e., creating forwarding tables from the recorded events). Examiner notes one skilled in the art would be motivated to set routing table information received from other routers for the purpose of setting, rewriting, or deleting a routers routing tables (e.g., managing a link-state database such as OSPF). Examiner furthermore notes no relationship between a setup of creating and a step of displaying with respect to the forwarding tables as recited in the claims.

As to **claim 35**, see e.g., column 4, lines 41-57.

As to **claim 36**, see e.g., column 2, lines 19-36.

13.   **Claims 14, 15, and 19-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,687,750 B1 to *Messinger et al.* ("*Messinger*") in view to U.S. Patent No.

6,625,659 B1 to *Aramizu et al.* ("*Aramizu*") and U.S. Patent Application 2002/0021675 A1 to

Feldmann.

As to **claim 14**, *Messinger* a processor configured to execute instructions in the

memory collected information from at least the nodes, see e.g., column 1, lines 56-

column 2, lines 36. In addition, the information mentioned above also describes the

network operation over a period of time. Furthermore, a step of reconstructing the

network operation over a period of time from the collect information and cause the

network operation to be displayed is further taught by the reference.

Messinger is silent to the further limitation "obtaining forwarding tables from the

nodes". *Messinger* is also silent to the further limitation "creating forwarding tables from

the collected information". For the rejection, the examiner notes the two limitations

above are not dependent upon one another. The examiner also notes the step of creating

forwarding tables may not include collected information based on the forwarding tables.

As such, *Aramizu* teaches creating a forwarding tables from the collect

information at e.g., column 2, lines 55-65. In particular, the collected information is

routing protocol information as disclosed at column 2, line 56-57. *Feldmann* teaches a

step of collecting forwarding tables from other nodes, see e.g., paragraph 0042 on page 4.

Thus examiner notes that it would have been obvious to one skilled in the art prior

to applicant's invention to further include the limitations "obtaining forwarding tables

from the nodes" and "creating forwarding tables from the collected information". In

particular, one skilled in the art would have been motivated to obtain forwarding tables

from nodes for the purpose of determining a network topology. In particular, *Feldmann*

teaches the above motivation at e.g., paragraph 0009 on page 1. In addition, one skilled

in the art would have been motivated to create forwarding tables from the collected

information for the purpose of maintaining an accurate routing table, such as for the

purpose of routing around link failures. In particular, *Aramizu* teaches the above

motivation at e.g., column 2, lines 21-24 and column 2, lines 55-65.

As to **claim 15**, with respect to node status change information and link status

change information see e.g., column 1, lines 30-55 of *Messinger*.

As to **claim 19**, see e.g., column 2, lines 1-18 of *Messinger*.

As to **claim 20**, see e.g., 3, lines 17-53 and figures 4a-4d of *Messinger*.

As to **claim 21**, see e.g., column 2, lines 19-36 of *Messinger*.

As to **claim 22**, see e.g., 3, lines 17-53 and figures 4a-4d of *Messinger*.

As to **claims 23-24**, see e.g., column 2, lines 1-18 of *Messinger*.

14.   **Claims 14, 15, 19, 23, and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable

over U.S. Patent No. 5,748,098 to *Grace* in view to U.S. Patent No. 6,625,659 B1 to *Aramizu et*

al. ("*Aramizu*") and U.S. Patent Application 2002/0021675 A1 to *Feldmann*.

As to **claim 14**, *Grace* teaches alerting an operator using a visual display of a

relationship between historical events (e.g., see Abstract).

With respect to the limitation "collecting information from at least one of the

nodes, the information describing the network operation over a period of time" see e.g.,

column 3, lines 50-56 and column 4, lines 41-53.

With respect to the limitation "reconstructing the network operation for the time

period from the collected information" see figure 2.

With respect to the limitation "replaying, for an operator, the network operation as the network operation has occurred during the time period using the reconstructed network operation" see figure 2 in addition to column 1, lines 23-34; column 6, lines 27-34; and column 6, line 60 – column 7, line 4. In particular, figure 2 shows a time period from t-9 to t-0.

Grace is silent to the further limitation "obtaining forwarding tables from the nodes". *Grace* is also silent to the further limitation "creating forwarding tables from the collected information". For the rejection, the examiner notes the two limitations above are not dependent upon one another. The examiner also notes the step of creating forwarding tables may not include collected information based on the forwarding tables.

As such, *Aramizu* teaches creating a forwarding tables from the collect information at e.g., column 2, lines 55-65. In particular, the collected information is routing protocol information as disclosed at column 2, line 56-57. *Feldmann* teaches a step of collecting forwarding tables from other nodes, see e.g., paragraph 0042 on page 4.

Thus examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to further include the limitations "obtaining forwarding tables from the nodes" and "creating forwarding tables from the collected information". In particular, one skilled in the art would have been motivated to obtain forwarding tables from nodes for the purpose of determining a network topology. In particular, *Feldmann* teaches the above motivation at e.g., paragraph 0009 on page 1. In addition, one skilled in the art would have been motivated to create forwarding tables from the collected information for the purpose of maintaining an accurate routing table, such as for the

purpose of routing around link failures. In particular, *Aramizu* teaches the above

motivation at e.g., column 2, lines 21-24 and column 2, lines 55-65.

As to **claim 15**, with respect to node status change information and link status

change information see e.g., column 1, lines 9-62.

As to **claim 19**, see e.g., column 4, lines 41-57 of *Grace*.

As to **claims 23-24**, see e.g., column 4, lines 41-57 of *Grace*.

15.   **Claim 25** is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No.

5,748,098 to *Grace* in view to U.S. Patent No. 6,625,659 B1 to *Aramizu et al.* ("*Aramizu*") and

U.S. Patent Application 2002/0021675 A1 to *Feldmann* in further view of U.S. Patent 5,437,009

to *Lane*.

As to **claim 25**, *Grace* is silent to the further limitations of allowing the operator

to at least one of fast forward and rewind the replaying network operation.

Lane teaches the above-cited limitation at e.g., figure 6 and column 5, lines 1-57.

Thus the examiner purposes to modify the back searching of *Grace* to further

include the limitation of fast forwarding and rewinding.

Thus examiner notes that it would have been obvious to one skilled in the art prior

to applicant's invention to further include the limitations of allowing the operator to at

least one of fast forward and rewind the replaying network operation. In particular, one

skilled in the art would have been motivated to make the purposed modification for the

purpose of allowing an efficient way of analyzing network events. *Lane* teaches such a

motivation found at e.g., column 2, lines 33-36.

16.   **Claim 25** is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No.

6,687,750 B1 to *Messinger et al.* ("*Messinger*") in view to U.S. Patent No. 6,625,659 B1 to

Aramizu et al. ("*Aramizu*") and U.S. Patent Application 2002/0021675 A1 to *Feldmann* in

further view of U.S. Patent 5,437,009 to *Lane*.

As to **claim 25**, *Grace* is silent to the further limitations of allowing the operator

to at least one of fast forward and rewind the replaying network operation.

Lane teaches the above-cited limitation at e.g., figure 6 and column 5, lines 1-57.

Thus the examiner purposes to modify the back searching of *Grace* to further

include the limitation of fast forwarding and rewinding.

Thus examiner notes that it would have been obvious to one skilled in the art prior

to applicant's invention to further include the limitations of allowing the operator to at

least one of fast forward and rewind the replaying network operation. In particular, one

skilled in the art would have been motivated to make the purposed modification for the

purpose of allowing an efficient way of analyzing network events. *Lane* teaches such a

motivation found at e.g., column 2, lines 33-36.

Allowable Subject Matter

17.   **Claims 1,2, 6-13, 26, and 37** are allowed.

18.   **Claims 18** are objected to as being dependent upon a rejected base claim, but would be

allowable if rewritten in independent form including all of the limitations of the base claim and

any intervening claims.

Conclusion

19.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123.

The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.
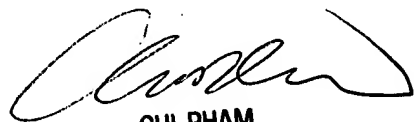
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system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris
Examiner
Art Unit 2663

DWF

CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600